

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

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| Applicant's or agent's file reference DNI-0025-PCT | FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small> | |
| International application No. PCT/US04/13339 | International filing date (<i>day/month/year</i>) 30 April 2004 (30.04.2004) | (Earliest) Priority Date (<i>day/month/year</i>) 30 April 2003 (30.04.2003) |
| Applicant DYNO NOBEL INC. | | |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the Report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II)

3. ☐ Unity of invention is lacking (See Box No. III)

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. _____
- ☐ as suggested by the applicant.
- ☐ as selected by this Authority, because the applicant failed to suggest a figure.
- ☐ as selected by this Authority, because this figure better characterizes the invention.
- b. ☒ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/13339

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C06C 5/04

US CL : 102/275.8

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 102/275.8,275.9,275.1,275.5,275.6; 86/21,22,1.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
USPAT, US-PGPUB, Derwents Abstracts

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| Y | US 4,220,087 A (POSSON) 02 September 1980 (02.09.1980), see entire document. | 1-25 |
| A | US 4,699,059 A (KELLY et al.) 13 October 1987 (13.10.1987), see abstract. | 16, 22 |
| Y | US 5,681,904 A (MANZARA) 28 October 1997 (28.10.1997), see abstract; col. 1, lines 10-24; col. 2, lines 10-25. | 1-25 |
| A | US 3,590,739 A (PER-ANDERS PERSSON) 6 July 1971 (06.07.1971), see entire document. | 1-25 |
| A | US 5,827,994 A (GLADDEN et al.) 27 October 1998 (27.10.1998), see abstract. | 16, 22 |
| A | US 5,009,163 A (ROBINS et al.) 23 April 1991 (23.04.1991), see col. 4, lines 10 - 26,; claims 1 & 7. | 17, 23 |
| A | WO 01/08937 A1 (HERRMANN) 8 February 2001 (08.02.2001), see abstract and figures 1-4. | 1-25 |
| A | US 6,170,398 A (RABOTINSKY et al.) 09 January 2001 (09.01.2001), see abstract. | 5, 10 |
| A | US 4,756,250 A (DIAS DOS SANTOS) 12 July 1988 (12.07.1988), see abstract. | 1-25 |



Further documents are listed in the continuation of Box C.



See patent family annex.

| | | | |
|--|---|-----|--|
| * Special categories of cited documents: | | "T" | later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "A" | document defining the general state of the art which is not considered to be of particular relevance | "X" | document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "E" | earlier application or patent published on or after the international filing date | "Y" | document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "L" | document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "&" | document member of the same patent family |
| "O" | document referring to an oral disclosure, use, exhibition or other means | | |
| "P" | document published prior to the international filing date but later than the priority date claimed | | |

Date of the actual completion of the international search

15 October 2004 (15.10.2004)

Date of mailing of the international search report

06 JAN 2005

Name and mailing address of the ISA/US

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/13339

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| A | US 5,597,973 A (GLADDEN et al.) 28 January 1997 (28.01.1997), col. 2, lines 20-57. | 1-25 |
| A | US 5,509,355 A (STEWART et al.) 23 April 1996 (23.04.1996), see abstract. | 1-25 |
| A | US 5,383,405 A (EVEREST) 24 January 1995 (24.01.1995), see abstract, fig. 4. | 1-25 |
| A | US 4,607,573 A (THURESON et al.) 26 August 1986 (26.08.1986), see abstract and figures. | 1-25 |
| A | US 3,730,096 A (PRIOR), 01 May 1973 (01.05.1973), see abstract and figures. | 1-25 |
| A | US 5,212,341 A (OSBORNE et al.) 18 May 1993 (18.05.1993), see abstract and figures. | 1-25 |